March 24, 2005

Mr. Edward J. Weinkam
Director, Regulatory Services
Nuclear Management Company, LLC
700 First Street
Hudson, WI 54016

SUBJECT: APPROVAL OF NUCLEAR MANAGEMENT COMPANY QUALITY ASSURANCE TOPICAL REPORT (TAC NOS. MC1309, MC1310, MC1311, MC1312, MC1313, MC1314, MC1315, MC1316)

By letter dated October 31, 2003, as supplemented by letters dated July 23, September 22, November 8, and December 3, 2004, Nuclear Management Company, LLC, (NMC, the licensee) submitted its Quality Assurance Topical Report (QATR) for review and approval by the U. S. Nuclear Regulatory Commission (NRC) staff in accordance with Title 10 of the *Code of Federal Regulations*, Part 50.54(a)(4).

The enclosed safety evaluation (SE) addresses the proposed consolidation of the quality assurance programs for Duane Arnold, Kewaunee, Monticello, Palisades, Point Beach and Prairie Island nuclear stations into a common QA program. Review of the licensee's proposed reduction in commitment regarding offsite review committees (Enclosure 6 of the licensee's submittal dated October 31, 2003, which was replaced in its entirety by Enclosure 3 by licensee's letter dated July 23, 2004) was previously approved by separate NRC correspondence dated January 13, 2005.

The enclosed SE documents the basis for our conclusion that the common QA program described in the QATR, as revised by the referenced supplemental letters, meets the criteria of Appendix B to Title 10 of the *Code of Federal Regulations*, Part 50 and is, therefore, acceptable.

Sincerely,

/RA/

Deirdre W. Spaulding, Project Manager, Section 1
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-331, 50-305, 50-263,
50-255, 50-266, 50-301,
50-282, and 50-306

Enclosure: Safety Evaluation

cc w/encl: See next page

March 24, 2005

Mr. Edward J. Weinkam
Director, Regulatory Services
Nuclear Management Company, LLC
700 First Street
Hudson, WI 54016

SUBJECT: APPROVAL OF NUCLEAR MANAGEMENT COMPANY QUALITY ASSURANCE TOPICAL REPORT (TAC NOS. MC1309, MC1310, MC1311, MC1312, MC1313, MC1314, MC1315, MC1316)

By letter dated October 31, 2003, as supplemented by letters dated July 23, September 22, November 8, and December 3, 2004, Nuclear Management Company, LLC, (NMC, the licensee) submitted its Quality Assurance Topical Report (QATR) for review and approval by the U. S. Nuclear Regulatory Commission (NRC) staff in accordance with Title 10 of the *Code of Federal Regulations*, Part 50.54(a)(4).

The enclosed safety evaluation (SE) addresses the proposed consolidation of the quality assurance programs for Duane Arnold, Kewaunee, Monticello, Palisades, Point Beach and Prairie Island nuclear stations into a common QA program. Review of the licensee's proposed reduction in commitment regarding offsite review committees (Enclosure 6 of the licensee's submittal dated October 31, 2003, which was replaced in its entirety by Enclosure 3 by licensee's letter dated July 23, 2004) was previously approved by separate NRC correspondence dated January 13, 2005.

The enclosed SE documents the basis for our conclusion that the common QA program described in the QATR, as revised by the referenced supplemental letters, meets the criteria of Appendix B to Title 10 of the *Code of Federal Regulations*, Part 50 and is, therefore, acceptable.

Sincerely,

/RA/

Deirdre W. Spaulding, Project Manager, Section 1
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-331, 50-305, 50-263, 50-255, 50-266, 50-301, 50-282, and 50-306

Enclosure: Safety Evaluation

cc w/encl: See next page

DISTRIBUTION:

PUBLIC	THarris	ACRS
PDIII-1 R/F	OGC	BBurgess
LRaghavan	DLPM DPR	EDuncan
DSpaulding	GGrant	AVegel
KO'Brien		

ADAMS Accession No.: ML050700416

Office	PDIII-1/PM	PDIII-1/LA	NMSS/SFPO	DIPM/IPSB/SC	PDIII-1/SC
Name	DSpaulding	THarris	RLewis	DThatcher	LRaghavan
Date	03/24/05	03/24/05	04/13/04	02/09/05	03/24/05

OFFICIAL RECORD COPY

cc:

Mr. John Paul Cowan
Executive Vice President &
Chief Nuclear Officer
Nuclear Management Company, LLC
700 First Street
Hudson, MI 54016

John Bjorseth
Plant Manager
Duane Arnold Energy Center
3277 DAEC Road
Palo, IA 52324

Steven R. Catron
Manager, Regulatory Affairs
Duane Arnold Energy Center
3277 DAEC Road
Palo, IA 52324

U. S. Nuclear Regulatory Commission
Resident Inspector's Office
Rural Route #1
Palo, IA 52324

Regional Administrator, Region III
U. S. Nuclear Regulatory Commission
2443 Warrenville Road, Suite 210
Lisle, IL 60532-4352

Jonathan Rogoff
Vice President, Counsel & Secretary
Nuclear Management Company, LLC
700 First Street
Hudson, WI 54016

Bruce Lacy
Nuclear Asset Manager
Alliant Energy/Interstate Power
and Light Company
3277 DAEC Road
Palo, IA 52324

Daniel McGhee
Utilities Division
Iowa Department of Commerce
Lucas Office Buildings, 5th floor
Des Moines, IA 50319

Chairman, Linn County
Board of Supervisors
930 1st Street SW
Cedar Rapids, IA 52404

Craig G. Anderson
Senior Vice President, Group Operations
700 First Street
Hudson, WI 54016

Mark A. Peifer
Site Vice President
Duane Arnold Energy Center
Nuclear Management Company, LLC
3277 DAEC Road
Palo, IA 52324-0351

Plant Manager
Kewaunee Nuclear Power Plant
N490 Highway 42
Kewaunee, WI 54216-9511

Manager, Regulatory Affairs
Kewaunee Nuclear Power Plant
N490 Highway 42
Kewaunee, WI 54216-9511

David Molzahn
Nuclear Asset Manager
Wisconsin Public Service Corporation
600 N. Adams Street
Green Bay, WI 54307-9002

Resident Inspectors Office
U. S. Nuclear Regulatory Commission
N490 Hwy 42
Kewaunee, WI 54216-9511

Larry L. Weyers
Chairman, President and CEO
Wisconsin Public Service Corporation
600 North Adams Street
Green Bay, WI 54307-9002

David Zellner
Chairman - Town of Carlton
N2164 County B
Kewaunee, WI 54216

Mr. Jeffery Kitsembel
Electric Division
Public Service Commission of Wisconsin
PO Box 7854
Madison, WI 53707-7854

Mr. Craig W. Lambert
Site Vice President
Kewaunee Nuclear Power Plant
Nuclear Management Company, LLC
N490 Highway 42
Kewaunee, WI 54216-9511

U.S. Nuclear Regulatory Commission
Resident Inspector's Office
2807 W. County Road 75
Monticello, MN 55362

Manager, Regulatory Affairs
Monticello Nuclear Generating Plant
Nuclear Management Company, LLC
2807 West County Road 75
Monticello, MN 55362-9637

Robert Nelson, President
Minnesota Environmental Control
Citizens Association (MECCA)
1051 South McKnight Road
St. Paul, MN 55119

Commissioner
Minnesota Pollution Control Agency
520 Lafayette Road
St. Paul, MN 55155-4194

Commissioner
Minnesota Department of Health
717 Delaware Street, S. E.
Minneapolis, MN 55440

Douglas M. Gruber, Auditor/Treasurer
Wright County Government Center
10 NW Second Street
Buffalo, MN 55313

Commissioner
Minnesota Department of Commerce
85 7th Place East, Suite 500
St. Paul, MN 55101-2198

Manager - Environmental Protection Division
Minnesota Attorney General's Office
445 Minnesota St., Suite 900
St. Paul, MN 55101-2127

John Paul Cowan
Executive Vice President & Chief Nuclear Officer
Nuclear Management Company, LLC
700 First Street
Hudson, WI 54016

Nuclear Asset Manager
Xcel Energy, Inc.
414 Nicollet Mall, R.S. 8
Minneapolis, MN 55401

Mr. Thomas J. Palmisano
Site Vice President
Monticello Nuclear Generating Plant
Nuclear Management Company, LLC
2807 West County Road 75
Monticello, MN 55362-9637

Robert A. Fenech, Senior Vice President
Nuclear, Fossil, and Hydro Operations
Consumers Energy Company
1945 Parnall Rd.
Jackson, MI 49201

Arunas T. Udrys, Esquire
Consumers Energy Company
1 Energy Plaza
Jackson, MI 49201

Supervisor
Covert Township
P. O. Box 35
Covert, MI 49043

Office of the Governor
P. O. Box 30013
Lansing, MI 48909

U.S. Nuclear Regulatory Commission
Resident Inspector's Office
Palisades Plant
27782 Blue Star Memorial Highway
Covert, MI 49043

Michigan Department of Environmental Quality
Waste and Hazardous Materials Division
Hazardous Waste and Radiological Protection Section
Nuclear Facilities Unit
Constitution Hall, Lower-Level North
525 West Allegan Street
P.O. Box 30241
Lansing, MI 48909-7741

Michigan Department of Attorney General
Special Litigation Division
525 West Ottawa St.
Sixth Floor, G. Mennen Williams Building
Lansing, MI 48913

Manager, Regulatory Affairs
Nuclear Management Company, LLC
27780 Blue Star Memorial Highway
Covert, MI 49043

Director of Nuclear Assets
Consumers Energy Company
Palisades Nuclear Plant
27780 Blue Star Memorial Highway
Covert, MI 49043

John Paul Cowan
Executive Vice President & Chief Nuclear Officer
Nuclear Management Company, LLC
700 First Street
Hudson, WI 54016

Douglas E. Cooper
Senior Vice President - Group Operations
Palisades Nuclear Plant
Nuclear Management Company, LLC
27780 Blue Star Memorial Highway
Covert, MI 49043

Daniel J. Malone
Site Vice President
Palisades Nuclear Plant
Nuclear Management Company, LLC
27780 Blue Star Memorial Highway
Covert, MI 49043

Mr. F. D. Kuester
President & Chief Executive Officer
WE Generation
231 West Michigan Street
Milwaukee, WI 53201

Regulatory Affairs Manager
Point Beach Nuclear Plant
Nuclear Management Company, LLC
6610 Nuclear Road
Two Rivers, WI 54241

Mr. Ken Duveneck
Town Chairman
Town of Two Creeks
13017 State Highway 42
Mishicot, WI 54228

Chairman
Public Service Commission
of Wisconsin
P.O. Box 7854
Madison, WI 53707-7854

Resident Inspector's Office
U.S. Nuclear Regulatory Commission
6612 Nuclear Road
Two Rivers, WI 54241

Nuclear Asset Manager
Wisconsin Electric Power Company
231 West Michigan Street
Milwaukee, WI 53201

Douglas E. Cooper
Senior Vice President - Group Operations
Palisades Nuclear Plant
Nuclear Management Company, LLC
27780 Blue Star Memorial Highway
Covert, MI 49043

Site Director of Operations
Nuclear Management Company, LLC
6610 Nuclear Road
Two Rivers, WI 54241

Dennis L. Koehl
Site Vice-President
Point Beach Nuclear Plant
Nuclear Management Company, LLC
6590 Nuclear Road
Two Rivers, WI 54241

Manager, Regulatory Affairs
Prairie Island Nuclear Generating Plant
Nuclear Management Company, LLC
1717 Wakonade Drive East
Welch, MN 55089

Manager - Environmental Protection Division
Minnesota Attorney General's Office
445 Minnesota St., Suite 900
St. Paul, MN 55101-2127

U.S. Nuclear Regulatory Commission
Resident Inspector's Office
1719 Wakonade Drive East
Welch, MN 55089-9642

Administrator
Goodhue County Courthouse
Box 408
Red Wing, MN 55066-0408

Tribal Council
Prairie Island Indian Community
ATTN: Environmental Department
5636 Sturgeon Lake Road
Welch, MN 55089

Craig G. Anderson
Senior Vice President, Group Operations
Nuclear Management Company, LLC
700 First Street
Hudson, WI 54016

Mr. Joseph M. Solymossy
Site Vice President
Prairie Island Nuclear Generating Plant
Nuclear Management Company, LLC
1717 Wakonade Drive East
Welch, MN 55089

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

CHANGE TO THE QUALITY ASSURANCE PROGRAM

QUALITY ASSURANCE PROGRAM CONSOLIDATION

DUANE ARNOLD ENERGY CENTER

KEWAUNEE NUCLEAR POWER PLANT

MONTICELLO NUCLEAR GENERATING PLANT

PALISADES NUCLEAR PLANT

POINT BEACH NUCLEAR PLANT UNITS 1 AND 2

PRAIRIE ISLAND NUCLEAR GENERATING PLANT UNITS 1 AND 2

DOCKET NOS. 50-331, 50-305, 50-263, 50-255, 50-266, 50-301, 50-282, 50-306

1.0 INTRODUCTION

By letter dated October 31, 2003 (Ref. 1), as supplemented by letters dated July 23, September 22, November 8, and December 3, 2004, Nuclear Management Company, LLC (NMC, the licensee) submitted the NMC Quality Assurance (QA) Topical Report (QATR) for U. S. Nuclear Regulatory Commission (NRC) review and approval in accordance with the provisions of Title 10 of the *Code of Federal Regulations* (10 CFR) 50.54(a)(4). The QATR would replace the currently docketed site-specific quality assurance programs for Duane Arnold (Ref. 2), Kewaunee (Ref. 3), Monticello (Ref. 4), Palisades (Ref. 5), Point Beach (Ref. 6) and Prairie Island (Ref. 4).

NRC staff review and approval of the licensee proposed reduction in commitment regarding offsite review committees (Enclosure 6 of the submittal) was documented by a separate safety evaluation (SE, Ref. 7).

2.0 REGULATORY EVALUATION

The QA program described in the NMC QATR follows the guidance of the American Society of Mechanical Engineers (ASME) Nuclear Quality Assurance (NQA) standard NQA-1-1994, "Quality Assurance Requirements for Nuclear Applications." NQA-1-1994, Part I, sets forth programmatic requirements for the establishment and execution of QA programs for the siting, design, construction, operation, and decommissioning of nuclear facilities. NQA-1-1994, Part II sets forth non-programmatic quality assurance requirements for the planning and execution of identified tasks during the fabrication, construction, modification, repair, maintenance, and testing of systems, components and structures for nuclear facilities. The guidance of Parts I

and II of NQA-1-1994 is similar to that provided by the American National Standards Institute (ANSI)/ASME N45.2 daughter standards developed in the 1970s and early 1980s. The licensee proposes to adopt NQA-1-1994 in lieu of certain current commitments to N45.2 daughter standards.

The NRC staff has previously approved the use of NQA-1-1994, as supplemented by the guidance of ANSI N18.7-1976, "Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants," for the Exelon nuclear operating facilities (Ref. 8). The NMC QATR incorporates explicit commitments to the QA requirements of NQA-1-1994, while following the guidance of ANSI N18.7-1976 (as endorsed by Regulatory Guide (RG) 1.33, Revision 2) directly into the QATR. The licensee proposes that the QATR, combined with its commitment to NQA-1-1994, provides for a QA program that meets the requirements of 10 CFR, Part 50, Appendix B.

3.0 EVALUATION

3.1 Changes to Current Quality Assurance Commitments

The QATR replaces the site-specific QA program descriptions for the Duane Arnold, Kewaunee, Monticello, Palisades, Point Beach, and Prairie Island nuclear power stations. Enclosure 2 of the licensee's submittal provides a comparison of each plant's current NRC approved QA program with the new QATR. Changes are characterized as (1) a reduction in commitment, (2) not a reduction in commitment, or (3) increase in commitment. The regulatory change control process described in 10 CFR 50.54(a) classifies changes as non-reductions [50.54(a)(3)] or reductions [50.54(a)(4)] in commitment. Changes that increase commitments (i.e., are clearly more conservative in meeting 10 CFR Part 50 Appendix B requirements) are made at the discretion of the licensee.

Many of the non-reductions in commitment are the result of changes in format or level of detail. The regulation as described in 10 CFR 50.34(b)(6)(ii) requires that QA program descriptions discuss how the applicable requirements of Appendix B regarding managerial and administrative control will be satisfied. In evaluating the adequacy of the level of detail of the revised QA program description, the NRC staff followed the guidance of the Standard Review Plan (NUREG-0800), Chapter 17.3 (SRP 17.3), "Quality Assurance Program Description." This review is addressed in section 3.3 of this safety evaluation (SE). Several changes were characterized as alternatives or exceptions previously reviewed by the NRC staff, which constitute non-reductions under the provisions of 50.54(a)(3)(ii). The NRC staff reviewed the bases cited by the licensee and concluded that the changes were applicable to the licensee's facilities.

The provisions of 10 CFR 50.54(a)(4) require staff review of any changes characterized as reductions in commitment prior to implementation. Enclosure 2 of the licensee's submittal identifies numerous changes characterized by the licensee as "reductions in commitment," and provides the basis for the acceptability of each change. The NRC staff reviewed the basis for each change in detail and concluded that the revised commitments continue to meet Appendix B requirements and, therefore, are acceptable. Consolidation of the site-specific programs is acceptable in that it continues to meet the requirements of 10 CFR Part 50, Appendix B.

3.2 Revised Basis for the NMC Operational Quality Assurance Program

The currently approved QA programs for NMC plants follow the guidance of ANSI N18.7-1976 and the ANSI N45.2 series of standards and corresponding NRC RGs. The new QATR is based on NQA-1-1994. The administrative requirements of ANSI N18.7-1976 are incorporated into the text of the QATR. The evolution of NQA-1 is important in establishing the acceptability of the proposed basis for the QATR.

In 1979, the ASME Committee on Nuclear Quality Assurance issued a new standard NQA-1-1979, based on N45.2-1977 and seven programmatic standards of the N45.2 series. In 1986, NRC RG 1.28 endorsed NQA-1-1983 as an acceptable method for complying with the provisions of Appendix B with regard to implementing the requisite QA program for the design and construction of nuclear power plants.

In December 2002, the NRC staff approved NQA-1-1994, in conjunction with ANSI N18.7-1976, as an acceptable method for complying with the Commissions regulations for Exelon's operational QA programs (Ref. 8). The 1994 edition of NQA-1 incorporates an additional seven, non-programmatic N45.2 standards. Enclosure 5 of the licensee's submittal compares ANSI N45.2 standard, to which the NMC QA program has made commitments, with NQA-1-1994. Based on its review, the NRC staff concluded that the licensee's adoption of NQA-1-1994, as implemented through the NMC QATR, adequately addresses the commitments to the subject ANSI N45.2 standards and is, therefore, an acceptable method implementing the applicable Appendix B requirements.

Where the licensee has taken an exception or alternative to the guidance of NQA-1-1994, it is addressed in the applicable section of the QATR. Enclosure 3 of the licensee's submittal provides the basis for each QATR alternative or exception to NQA-1-1994, which has been previously approved by the NRC. The NRC staff has reviewed the cited precedents and determined that they are applicable to the NMC QA, and therefore, acceptable.

The guidance of ANSI N18.7-1976 has been incorporated into the text of the QATR. The principal difference between ANSI N18.7-1976 (ANS 3.2) and NQA-1-1994 is the inclusion of administrative controls, which were incorporated into the ANS standard in 1976. NMC proposes that the QATR, combined with its commitment to RG 1.28, provides an acceptable alternative to RG 1.33 and ANSI N18.7-1976 in that the QATR provides both QA and administrative requirements consistent with that guidance of ANSI N18.7-1976 and provides for a QA program that meets 10 CFR Part 50, Appendix B.

Enclosure 4 of the licensee's submittal compares ANSI N18.7-1976 guidance with NMC QATR commitments and the applicable requirements of NQA-1-1994. The NRC staff has reviewed the comparison presented in Enclosure 4, applicable sections of the QATR, and the licensee's stated positions with respect to RG 1.28, Revision 3 and RG 1.33 Revision 2. Enclosure 4 shows that, where differences between the QA requirements of ANSI N18.7-1976 and NQA-1-1994 exist, substantive commitments have been included in the QATR. The similarity between the QA requirements of ANSI N18.7-1976 and NQA-1-1994 is due to the fact that they are evolutionary developments of the same ANSI/ASME N45.2 standard. Prior to 1978, the RGs for construction/design and operational QA programs both endorsed ANSI N45.2-1977 as an acceptable method for complying with the Commission's regulations with regard to overall

QA requirements. In 1978, RG 1.33, Revision 3 endorsed ANSI N18.7-1976, which consolidates quality assurance and administrative control requirements.

As noted above, NRC staff approved NQA-1-1994, as supplemented by ANSI N18.7-1976, as an acceptable basis for a QA program for the operational phase of nuclear power plants (Ref. 8). The principal difference between the approach taken by NMC from that previously approved is that NQA-1-1994, in conjunction with QATR commitments, are collectively equivalent to the guidance provided by ANSI N18.7-1976. The administrative requirements of N18.7-1976 are addressed directly, while the QA requirements of N18.7-1976 and the QATR and NQA-1-1994 are compared and shown to be equivalent. With the exception of the independent review program, described in ANSI N18.7-1976, Section 3.4, QATR commitments comply with ANSI N18.7-1976 guidance. The proposed alternative to the independent review program was addressed by separate evaluation (Ref. 7).

The NRC staff reviewed the licensee's basis for adopting NQA-1-1994 as implemented through the QATR and finds it to be an acceptable method for complying with the Commission's regulations with regard to overall QA program requirements for the operation phase of nuclear power plants.

3.3 Acceptability of the QA Program Description

NRC Standard Review Plan Section 17.3 (SRP 17.3), Quality Assurance Program Description, provides an outline of a standardized QA program for construction permit holders, their principal contractors, and operator facility licensees. The program is organized into three discrete areas of activity: management, performance/verification, and self-assessment. Encompassed within the three areas are the 18 quality assurance criteria of 10 CFR Part 50, Appendix B. A summary of the licensee's QA program addressing these three areas is provided in this section.

The licensee's QA program description conforms to the format of SRP 17.3. Appendices to the QATR address commitments for operational review, procedures, and definitions of terms in addition to those provided in NQA-1-1994. The acceptance criteria of SRP 17.3 were used as the basis for evaluating the acceptability of the licensee's QA program description in conformance with the provisions of 50.34(b)(6)(ii). SRP 17.3 provides guidance as to program format, attributes, and level of detail.

3.3.1 Management

The QATR is the top-level policy document that establishes the quality policy and assigns major functional responsibilities for plants operated by NMC. In establishing its organizational structure and authorities, NMC commits to compliance with NQA-1-1994, Basic Requirement 1 and Supplement 1S-1. The Chief Executive Officer (CEO) is responsible for overall corporate policy and implementation of the quality assurance program (QAP). The Chief Nuclear Officer (CNO) reports to the CEO and has overall responsibility for the safe and reliable operation of nuclear stations operated by NMC. Reporting to the CNO are senior vice presidents (VPs) responsible for nuclear plant operations and support via staff at both the corporate and site levels.

Also reporting to the CNO is the VP Nuclear Assessment Programs. This position is responsible for activities that include establishing quality control practices and policies for quality verification activities; initiating stop work, requesting any other actions deemed necessary to avoid unsafe plant conditions or a significant violation of the QAP; periodically apprising the CEO and CNO of the status of the QA program at NMC facilities and immediately apprising them of significant problems affecting quality; and verifying implementation of solutions for significant conditions adverse to quality identified by Nuclear Oversight.

The Director Nuclear Oversight, reports to the VP Nuclear Assessment, and is responsible for establishing, maintaining, and interpreting NMC quality assurance policies and procedures; establishing the requirements for assessor and inspector certification; managing the overall independent assessment process; establishing quality control practices and policies for quality verification activities; and controlling and maintaining the QATR. Additionally, this position provides for supplier evaluation; the conduct of supplier assessments or surveys (including their sub-tier suppliers); and verification that supplier QA programs comply with NMC requirements. This position entails stop work authority at the sites and corporate offices.

NMC site organizations are typically directed by a Site VP, who reports to a Senior VP or the CNO, and is responsible for overall plant nuclear safety and the implementation of the QAP. This position is responsible for station compliance with NRC operating license, governmental regulations, and ASME Code requirements, if applicable, and provides day-to-day direction and management of plant operations activities. The Site Director reports to the Site VP and is responsible for plant operations and maintenance, training and project management, and functionally for site engineering and regulatory affairs. The site reporting structure and management positions responsible for plant operations, training, business support, engineering, regulatory affairs, performance assessment, and nuclear oversight are identified. Responsibility and authority for executing an effective overall QA program and delegation of program responsibilities are clearly described and defined.

Provisions for establishing and maintaining formal indoctrination and training programs for personnel performing, verifying or managing activities within the scope of the QAP are described. In establishing qualification and training programs, NMC complies with NQA-1 Basic Requirement 2 and Supplement 2S-1, 2S-2, 2S-3, and 2S-4, as described in Section A.5 of the QATR. NMC establishes training and qualification requirements consistent with the NRC "Commission Policy Statement on Training and Qualifications of Nuclear Power Plant Personnel," (50 FR 11147) and 10 CFR Part 50, Section 50.120, Training and Qualification of Nuclear Power Plant Personnel. Staff qualifications for positions within the scope of 10 CFR 50.120 are delineated in plant technical specifications. Staff training for positions identified in 10 CFR 50.120 is accomplished according to programs accredited by the National Accrediting for Nuclear Training that implement a systematic approach to training. The NRC staff reviewed NMC's position with respect to the guidance of RG 1.28, Revision 3, and found it to be acceptable.

NMC commitments to the provisions of certain QA industry standards other than ASME NQA-1 are delineated in QATR Section A.7.3. Alternatives to the positions of RGs identified in SRP 17.3 Section VI have been reviewed and found to be acceptable in that they were either already approved for NMC plants prior to QA program consolidation or the basis for the position has been provided in the submittal. The NRC staff reviewed the bases for NMC positions and found them to be acceptable.

3.3.2. Performance/Verification

Personnel who work directly or indirectly for the licensee are responsible for achieving acceptable quality for the scope of activities addressed by the QA topical. These activities include design, engineering, procurement, manufacturing, construction, installation, start-up, maintenance, modifications, and operations. Activities are performed as directed by documented instruction, procedures, and drawings that are of a detail appropriate for the activity's complexity and effect on safety. Instructions, procedures and drawings specify quantitative or qualitative acceptance criteria for the activity, and verification is against these criteria.

• Design Control

The licensee's design control program includes provisions to control design inputs, processes, outputs, changes, interfaces, records, and organizational interfaces. The program includes provisions to control design inputs, processes, outputs, changes, interfaces, records and organizational interfaces. In establishing its program for design control, NMC commits to compliance with NQA-1-1994, Basic Requirement 3, and Supplement 3S-1, Sections 1, 2, 3, 5, 6, and 7. The NMC design control program includes requirements for verifying the acceptability of design activities and documents, consistent with their effect on safety. In establishing its program for design verification, NMC commits to compliance with NQA-1-1994, Basic Requirement 3, and Supplement 3S-1, Section 4.

• Procurement

NMC establishes and implements controls to assure that purchased items (components, spares, and replacement parts necessary for plant operation, refueling, maintenance and modifications) and services are subject to quality and technical requirements at least equivalent to those specified for original equipment or specified by properly reviewed and approved revisions to assure the items are suitable for the intended service, and are of acceptable quality, consistent with their effect on safety. In establishing controls for procurement, NMC commits to compliance with NQA-1-1994, Basic Requirement 4 and 7, and Supplements 4S-1 and 7S-1 with the exceptions stated in the QATR. (The NRC staff evaluations of exceptions to NGA-1-2994 is summarized in Section 3.2 of this SE.)

• Procurement Verification

NMC establishes and implements measures to verify the quality of purchased items and services, whether purchased directly or through contractors, at intervals and to a depth consistent with the item's or service's importance to safety, complexity, quantity, and the frequency of procurement. In establishing procurement verification controls, NMC commits to compliance with NQA-1-1994, Basic Requirement 7 and Supplement 7S-1.

• Identification and Control of Items

NMC establishes and implements provisions for the identification and control of items to prevent the use of incorrect or defective items. In establishing provisions for identification and control of

items, NMC commits to compliance with NQA-1-1994, Basic Requirement 8 and Supplement 8S-1.

• Handling, Storage and Shipping

NMC establishes and implements provisions to control the handling, storage, shipping, cleaning and preservation of items to prevent inadvertent damage, loss or deterioration. In establishing provisions for handling, storage and shipping, NMC commits to compliance with NQA-1-1994, Basic Requirement 13 and Supplement 13S-1. NMC complies with the requirements of NQA-1-1994, Subpart 2.2, with the exceptions stated in the QATR, and therefore, acceptable.

NMC complies with the requirements of NQA-1-1994, Subpart 2.1, to establish appropriate provisions for the cleaning of fluid systems and associated components; and Subpart 2.3 to establish appropriate provisions for housekeeping; with the exceptions stated in the QATR.

• Test Control

NMC establishes and implements testing programs to demonstrate that items within the scope of the QA program will perform satisfactorily in service, that the plant can be operated safely and as designed, and that the coordinated operation of the plant as a whole is satisfactory.

In establishing provisions for testing, NMC commits to compliance with NQA-1-1994 Basic Requirement 11 and Supplement 11S-1.

• Measuring and Test Equipment

NMC establishes and implements provisions to control the calibration, maintenance, and use of measuring and test equipment, including installed plant instrumentation, that provide information important to safety plant operation.

In establishing provisions for control of measuring and test equipment, NMC conforms to compliance with NQA-1-1994, Basic Requirement 12, Supplement 12S-1 and Subpart 2.16, with the exception stated in the QATR.

• Inspection, Test and Operating Status

NMC establishes and implements measures to identify the inspection, test and operating status of items and components with the scope of the QA program in order to maintain personnel and reactor safety and avoid unauthorized operation equipment.

In establishing measures for control of inspection, test, and operating status, NMC complies with NQA-1-1994, Basic Requirement 14.

• Special Process Control

NMC establishes and implements provisions to assure that special processes that require interim process controls to assure quality, such as welding, heat treating, chemical cleaning, and nondestructive examination, are controlled. In establishing measures for the control of

special processes, NMC complies with NQA-1-1994, Basic Requirement 9 and Supplement 9S-1, as well as the applicable ASME Boiler and Pressure Vessel Codes provisions established via 10 CFR 50.55.

• Inspection

NMC establishes and implements provisions for inspections to assure that items, services, and activities affecting safety meet established requirements and conform to applicable documented instructions, procedures and drawings.

In establishing inspection requirements, NMC complies with NQA-1-1994, Basic Requirement 10, Supplement 10S and Subpart 2.4. For situations comparable to original construction NMC complies with the requirements of Subparts 2.5 and 2.8, for establishing inspection requirements.

• Corrective Action

NMC establishes a formal corrective action to promptly identify, control, document, classify, and correct conditions adverse to quality. Program implementation assures that personnel have both the responsibility and authority to identify conditions adverse to quality, and the opportunity to suggest, recommend or provide solutions to resolve the conditions. Provisions include verification and resolution of significant issues. Reworked, repaired and replacement items are inspected and tested to meet the original inspection or test requirements or appropriately specified alternatives.

In establishing provisions for corrective action and control of non-conforming items, NMC complies with NQA-1-1994, Basic Requirements 15 and 16 and Supplement 15S-1.

• Document Control

NMC establishes and implements provisions to specify the format and content, and control the development, review, approval, issue, use and revision of documents that specify quality requirements or prescribe activities affecting quality or safety operation to assure that the correct documents are being employed.

In establishing provisions for document control, NMC complies with NQA-1-1994, Basic Requirement 6 and Supplement 6S-1.

• Records

NMC establishes and implements provisions to ensure that sufficient records of items and activities affecting quality are generated and maintained to reflect completed work. Such records may include, but are not limited to, design, engineering, procurement, manufacturing, construction, inspection, test, installation, modification, operations, maintenance, corrective action and assessment. The provisions establish requirements for records administration, including generation, receipt, preservation, storage, safekeeping, retrieval and final disposition.

In establishing provisions for records, NMC commits to compliance with NQA-1-1994, Basic Requirement 17 and Supplement 17S-1, with the exception stated in the QATR.

Additionally, in response to an NRC staff request for additional information to clarify how 10 CFR Part 71 and 10 CFR Part 72 recordkeeping requirements will be satisfied, the licensee made revisions to Section B15 of the NMC QATR which adds language that commits to the records provisions of 10 CFR 71.135 and 10 CFR 72.174:

> "…The provisions establish requirements for records administration, including generation, receipt, preservation, storage, safekeeping, retrieval and final disposition. For activities governed by 10 CFR 71 or 72, these provisions address the specific requirements of Sections 71.135 and 72.174.
>
> NMC uses the list of records in 10 CFR 71.135, 10 CFR 72.174, and NQA-1 Non-mandatory Appendix 17A-1, supplemented by the recommended retention times established in Regulatory Guide 1.28, position C.2 (Table 1), to establish the types of records that will be created and retained in support of plant operation."

- Plant Maintenance

NMC establishes controls for the maintenance or modification of items and equipment with the scope fo the QA program to ensure quality at least equivalent to that specified in original design bases and requirements such that safety-related structures, systems and components are maintained in a manner that assures their ability to perform their intended safety function(s). In establishing controls for plant maintenance, NMC complies with NQA-1-1994, Subpart 2.18, with the exceptions stated in the QATR, and therefore, acceptable.

- Computer Software

NMC establishes and implements provisions to assure that computer software used in applications affecting safety is prepared, documented, verified and tested, and used such that the expected output is obtained and configuration control maintained. NMC complies with the requirements of NQA-1-1994, Supplement 11S-2 and Subpart 2.7, to establish the appropriate provisions.

3.3.3 Self-Assessment

NMC establishes programs for reviews and assessments to verify that activities covered by the quality assurance program are performed in conformance with established requirements, that significant plant changes, tests and procedures are reviewed prior to implementation, that reportable events are promptly investigated and reported, and that trends are promptly identified. These programs are, themselves, subject to review for effectiveness as part of the overall assessment process.

Self-assessments are conducted to verify compliance and to improve performance; results are reported to a level of management having the authority to effect corrective action and to verify satisfactory resolution of problems.

Independent assessments are performed to monitor overall performance and confirm that applicable activities conform to the requirements of the QA program and that the program is effectively implemented. The process for selection and scheduling of audits is based on the status, performance, and effect on safety of the process being assessed. The process for selection and scheduling of audits is similar to the process for performance-based auditing previously approved by the NRC (Ref. 9) and is applicable to the licensee's facilities. NMC complies with the NQA-1-1994 Basic Requirement 18 and Supplement 18S-1 in establishing the independent assessment program. The term "independent assessment," as used in the QATR, is equivalent to the term "audit" with respect to commitments to QA standards and RGs.

3.3.4 Plant Operating Review Committee

The Plant Operating Review Committee, described in Appendix A of the QATR, follows the guidance of ANSI N18.7-1976, Section 3.4.2 in advising the Plant Manager on all plant-related matters concerning nuclear safety. The committee also conducts independent reviews described in ANSI N18.7-1976, Sections 3.4.4, 4.5, and 5.2.11. These reviews were previously conducted by the Offsite Review Committee. NRC review and approval of this reduction in commitment is documented by letter dated January 13, 2005 (Ref. 7).

NMC uses procedures to provide an approved, preplanned method of conducting activities affecting safety. NMC follows the guidance of RG 1.33, regulatory position C.1, in using the guidance of Appendix A to that RG for establishing the types of procedures that are necessary to control and support plant operation.

Based on review of the QATR, the NRC staff finds that it meets the acceptance criteria of NRC SRP 17.3.

4.0 CONCLUSION

Based on review of the licensee's consolidated QA program, described in the proposed QA topical report, the staff concludes that the single QA program can be applied to the eight nuclear plants referenced in the submittal. The staff review included a comparison of the commitments contained in the current, approved QA programs for each of the referenced plants. The NRC staff further evaluated the bases provided by the licensee for each of the numerous reductions in program commitments. The adoption of NQA-1-1994 in conjunction with the QATR, which incorporates supplementary requirements of ANS N18.7-1976, was determined to provide an acceptable basis for the quality assurance program description. The licensee's positions with respect to applicable standards and regulatory guides were reviewed and found acceptable. The acceptance criteria of NRC SRP 17.3 were used in evaluating the content of the licensee's quality assurance program description. On the basis of its review, the staff concludes that the QATR adequately describes the licensee's quality assurance program. The proposed QATR continues to meet the requirements of 10 CFR Part 50, Appendix B and is, therefore, acceptable.

5.0 REFERENCES

1. Letter from Nuclear Management Company, LLC to the U. S. NRC, "Request for Approval of Nuclear Management Company Quality Assurance Topical Report," October 31, 2003.

2. “Quality Assurance During the Operations Phase”, Chapter 17.2, Duane Arnold Updated Final Safety Analysis Report, Revision 29, April 18, 2003.

3. “Operational Quality Assurance Program Description,” Kewaunee Nuclear Power Plant, Revision 22, June 5, 2002.

4. “Operational Quality Assurance Plan: Xcel Energy, Inc.,” Revision 25, May 8, 2003.

5. “Quality Program Description for Nuclear Power Plants - Palisades Nuclear Power Plant,” Revision 21, March 11, 2002.

6. “Quality Assurance Program,” Final Safety Analysis Report,” Point Beach Nuclear Plant, June 2003.

7. Letter from U. S. NRC to Nuclear Management Company, LLC, “Approval of Nuclear Management Company Request for a Reduction in Commitment in Quality Assurance Program Regarding Offsite Review Committees, Revision 1,” January 13, 2005.

8. Letter from U. S. NRC to Exelon Generation Company, LLC, “Approval of Proposed Revision 70 of Quality Assurance Topical Report EGC-1A,” December 24, 2002.

9. Letter from U. S. NRC to Entergy Operations, Inc., “Revision of the Operational Quality Assurance Manual for the Grand Gulf Station,” July 25, 1996.

Principal Contributors: Ken Heck and Frank Jacobs

Date: March 24, 2005